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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,864	04/02/2001	Kevin J. McGrath	5500-65900	9993

7590

05/19/2004

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EXAMINER

TSAL, HENRY

ART UNIT	PAPER NUMBER
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2183

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,864

Applicant(s)

MCGRATH, KEVIN J.

Examiner

Henry W.H. Tsai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 and 20 is/are allowed.
- 6) ☒ Claim(s) 1,2,6-8,12-14 and 18 is/are rejected.
- 7) ☒ Claim(s) 3-5, 9-11, 15-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, 7, 11, 13, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Stallings, "Computer Organization and Architecture", 4th edition, 1996, pages 259-262, and 368-371, herein referred to as Stallings.

Referring to claims 1, 7, and 13, Stallings discloses as claimed a processor comprising: a segment register (CS, DS, ES, FS, GS, or SS, see Fig. 10.2 on page 369) configured to store a segment selector (selectors inside registers CS, DS, ES, FS, GS, or SS, see Fig. 10.2 on page 369) locating a segment descriptor (one of the descriptors see Fig. 10.2 on page 369); and an

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execution core (inherently existing in a Pentium system mentioned in Stallings, see page 368 regarding Pentium Addressing Modes) coupled to the segment register, wherein the execution core is configured to: (i) execute a first instruction (inherently existing in a Pentium system mentioned in Stallings, see page 368 regarding Pentium Addressing Modes) specifying the segment register, the execution core being selectively responsive to the segment descriptor during execution of the first instruction dependent on which of a plurality of protected operating modes (such as "Base Index and displacement" mode, or "Base with scaled Index and displacement" mode, see Table 10.2, on page 370) is active in the processor; and (ii) update the segment register in response to a segment load instruction (inherently existing in a Pentium system when a segment register CS, DS, ES, FS, GS, or SS, see Fig. 10.2 on page 369, is updated or loaded) mentioned in Stallings, see page 368 regarding Pentium Addressing Modes) independent of which of the plurality of protected operating modes is active. Note the step of loading a segment register CS, DS, ES, FS, GS, or SS, see Fig. 10.2 on page 369, is inherently independent of which of the plurality of protected operating modes is active since it is just a data movement operation.

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As to claims 5, 11, and 17, Stallings also discloses a system: comprising a second segment register (CS, DS, ES, FS, GS, or SS, see Fig. 10.2 on page 369) configured to store a second segment selector (selectors inside registers CS, DS, ES, FS, GS, or SS, see Fig. 10.2 on page 369) locating a second segment descriptor (one of the descriptors see Fig. 10.2 on page 369), wherein the execution core is coupled to the second segment register (CS, DS, ES, FS, GS, or SS, see Fig. 10.2 on page 369) and is configured to execute a second instruction specifying the second segment register (for using SR in Table 10.2, On page 370), and wherein the execution core is responsive to the second segment descriptor during execution of the second instruction independent of which of the plurality of protected operating modes is active (note in the protected operating modes of: Displacement, Base, Base with Displacement, Base Index with Displacement, Scaled Index and Displacement, and Base with Scaled Index and Displacement, SR is used and independent of which of the protected operating modes is active).

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Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 8, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stallings, "Computer Organization and Architecture", 4th edition, 1996, pages 259-262, and 368-371, herein referred as Stallings.

Stallings (on pages 368-371) discloses the claimed invention except for: in a first protected operating mode of the plurality of protected operating modes, a virtual address has greater than 32 bits.

However, Stallings (on pages 259-262) discloses a 64-bit PowerPC comprises in a first protected operating mode of the plurality of protected operating modes (note there inherently existing a protected operating mode in the 64-bit PowerPC), a virtual address has greater than 32 bits (80-bit virtual address, see Fig. 7.29).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system mentioned in Stallings (on pages 368-371) (a Pentium system mentioned in Stallings, see page 368 regarding Pentium Addressing Modes) to comprise in a first protected operating mode of the plurality of protected operating modes, a virtual address has greater than 32 bits, as taught by Stallings (on pages 259-262) in order to increase the address space for the system mentioned in Stallings (on pages 368-371).

Allowable Subject Matter

5. Claims 3, 4, 9, 10, 15, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 19 and 20 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter: Stallings, "Computer Organization and Architecture", 4th edition, 1996, pages 259-262, and 368-371, the closest reference, and the other prior art do not teach or

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fairly suggest: a method step of branching to a code segment for establishing a second protected operating mode when the loaded segment descriptors are used in combination with the other limitations of claim 19; and the combination is not obvious.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure wherein Herevin et al.'879 also discloses a processor setting a segment access indicator during the execution stages and comprising segment descriptor as shown in Fig. 4; and McGrath'806 also discloses a segment register configured to store a segment selector locating a segment descriptor as the claimed invention.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Henry Tsai whose telephone number is (703) 308-7600. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Eddie Chan, can be reached on (703)

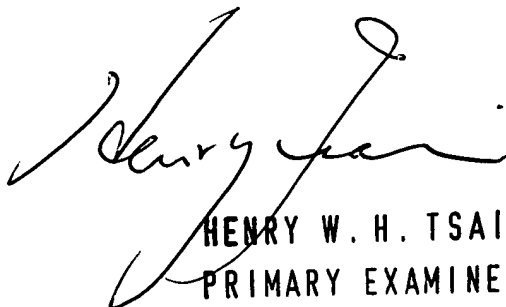
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305-9712. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 receptionist whose telephone number is (703) 305-3900.

10. In order to reduce pendency and avoid potential delays, Group 2100 is encouraging FAXing of responses to Office actions directly into

the Group at fax number: 703-872-9306.

This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2100 will be promptly forward to the examiner.



HENRY W. H. TSAI
PRIMARY EXAMINER

May 11, 2004